
An analysis on Effects of Supportive Supervision for data quality improvement in Rampur District of Uttar Pradesh State.

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Background

- A health management information system (HMIS) is a process whereby health data (input) are recorded, stored, retrieved and processed for decision-making (output).
- Maintaining a good HMIS is an essential part of running a health system. Timely and accurate information is necessary to formulate and implement effective programmes. Realizing the importance of sound health information system as accurate, relevant and up-to-date, information is essential for the health service providers at all levels so that they can initiate action on the gaps in the system based on evidence and information.
- During the phase-I, UPTSU has designed and implemented an internal MIS system (monthly facility report/MFR) to track important facility level outcomes which are critical for improving for RMCNH+A results and is not available in the HMIS system of the state (or country)

Rationale

- Good health information system is very important for addressing health issues and improving of health care delivery. In India the health information system is generated from the grassroots level (Sub-Centres) up to the higher level of Healthcare Institution.
- In Uttar Pradesh state of India, MoU with Uttar Pradesh Technical support unit / India health action trust (UPTSU/IHAT) works to improve public health in UP. It has one of the unit- Monitoring and Evaluation has planned to improve the data quality by transfer skills and knowledge to partners by offering techno-managerial support and building knowledge translation platforms.
- One of the strategy was developed to strengthening quality of data of all ENM blocks of 25 HPDs is data audit, feedback and facility level action planning which is unique.
- There are so many studies have previously conducted to study various aspects for data quality issues and challenges, this topic is far from being studied in the research area. This study is conduct in the area of data quality to analyze the impacts of the innovative approach that had been taken.

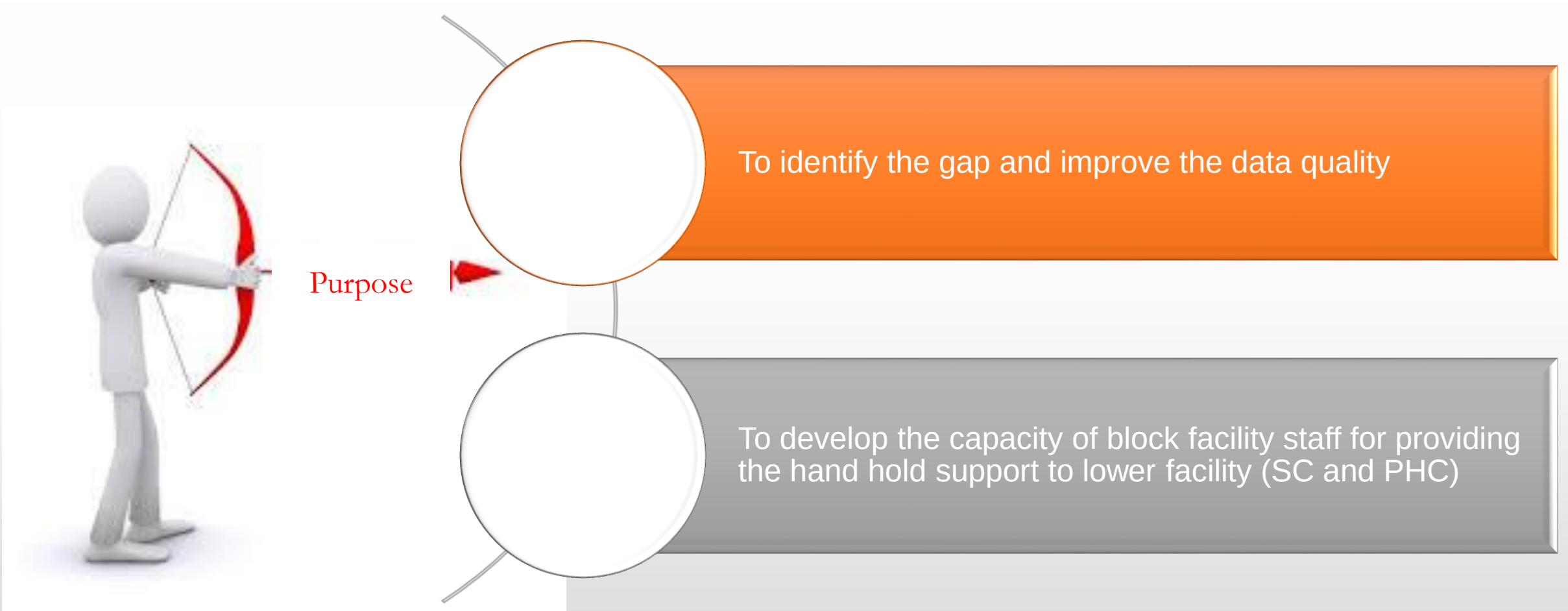
Supportive Supervision concept

What is supportive supervision?

*Supportive supervision is a facilitative approach to supervision that promotes **hand hold support, joint problem-solving and communication** between facilitator and participant*



What is the objective of Supportive supervision



Supportive supervision for improvement of data quality

Gap Identification

- What is the gap- Which data element/section, non matching with source register, left blank, entered zero
- Why is the gap- compilation problem, source register, understanding etc.

Problem Solving

- How to fix – need correction in entry, need to add additional column for data recording, process of compilation, give clarity on data element etc.

Capacity building

- Make sustainable for later months
- Share the gaps, reason of gap, what are the check points and how to solve
- Explain the process to conduct a SS in other facility

Research Question

Research Question	Method
1. What is the effects of Supportive Supervision data audit towards the improvement of data quality in Rampur District?	The UPHMIS Supportive supervision data , generated by IHAT, is used for analyzed to understand the district level variations in the reporting status between facility record and UPHMIS reported data
2. What are facilitators or barriers for a SN/BPM to generate and report good quality data?	Based on the analysis a observation is made for identified the gaps on those facility and the systemic challenges and opportunities to improve the data quality is also captured through an discussion with the SN/BPM/ MOIC

Research Objective

- To identify the effectiveness of Supportive Supervision audit for the data quality improvement in MNCH.
- To identify the factors of good quality reporting and poor quality reporting of selected indicators among block/DWH in Districts.

Research Methods

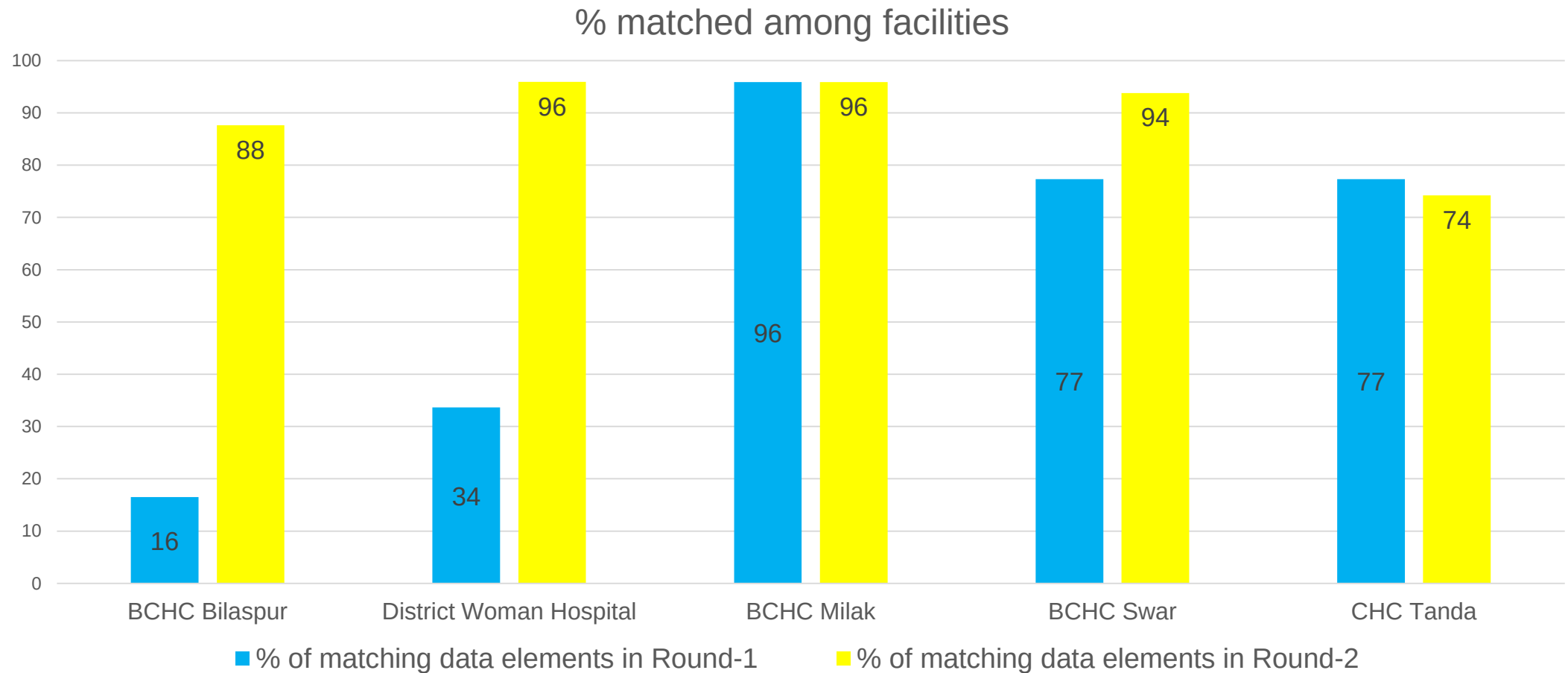
- **Sample Area / Coverage:** Out of 122 enhance nurse mentoring (ENM) facilities and 26 district hospitals selected for MFR Data Audit. This respective study will be conducted in Four Technical support unit Blocks (Bilaspur, Milak, Swar, Tanda) and DH (District Women Hospital) of District Rampur, Uttar Pradesh. These block have been selected as in these four blocks Indian health action trust is providing technical support, on the basis of delivery case load, two blocks are high case delivery load blocks and other two blocks are low case delivery load.
- **Sampling-** There are five zone categorize under UPTSU for 25 HPDs. In Bareilly zone there are five districts. In Rampur District out of six blocks in Rampur, four blocks have been selected, as in these four blocks technical support to the NRHM is provided by the Uttar Pradesh Technical Support Unit/Indian health action trust(UPTSU/IHAT).

Data elements covered in the data audit and analysis

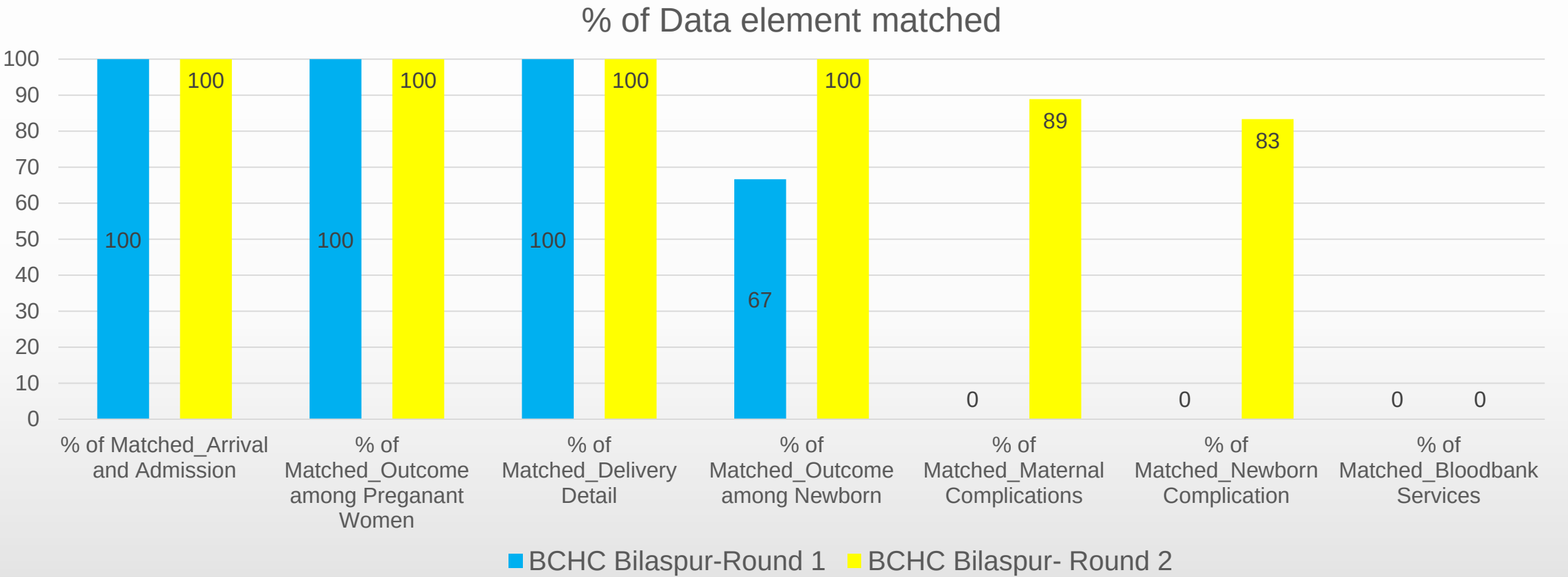
Sl#	Domain (#Data Elements)	Description of data elements
1	Arrival and admission (5)	Number of pregnant women who arrived as well as admitted in the facility (labour, not labour), Case sheet filled for deliveries
2	Outcome among arrival pregnant women (3)	Number of pregnant women who were referred to higher facility, sent home healthy and deaths at facility
3	Delivery details (6)	Total number of delivery conducted, Total number of C-section deliveries performed, Total number live births and Still births (Fresh, Macerated)
4	Outcome among newborn (3)	Number of newborn who were referred to higher facility, sent home healthy and deaths at facility
5	Maternal complication (54)	Number of pregnant women whose complication outcomes (sent home healthy, Left Against Medical Advise (LAMA), died at facility, referred and survived, referred and died, referred status unknown) from major 9 complications(Prolonged labour, Obstructed labour, Pregnancy induced hypertension, Mild-severe pre-eclampsia, Eclampsia, Antepartum Hemorrhage (APH), Infection/Sepsis, Postpartum Hemorrhage (PPH), Anemia)
6	Newborn Complication (24)	Number of pregnant women whose complication outcomes (sent home healthy, Left Against Medical Advise (LAMA), died at facility, referred and survived, referred and died, referred status unknown) from; pre-term births, low birth weight, asphyxia, birth anomalies
7	Blood bank Services (3)	Availability status of functional blood bank units, functional blood storage unit, Number of complicated pregnancy treated with blood transfusion

Results

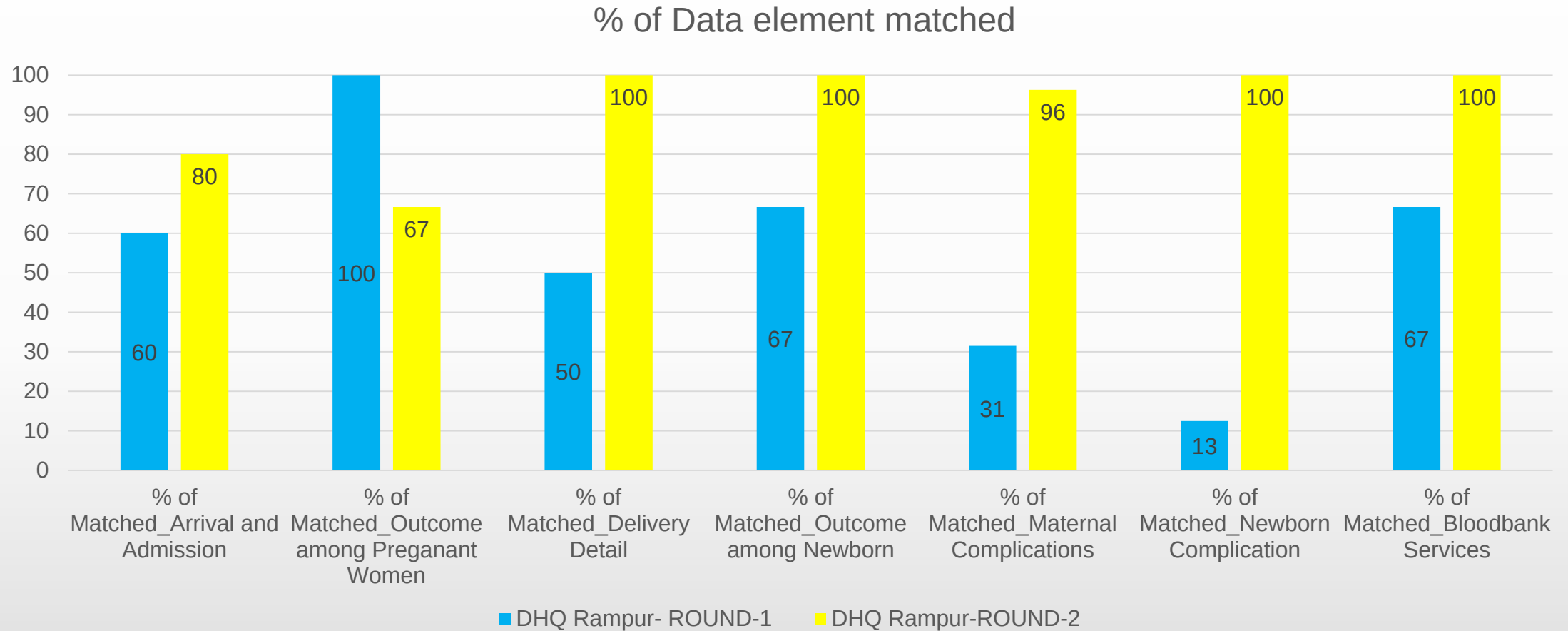
% OF ALL DATA ELEMENTS MATCHED ACROSS FACILITY IN DISTRICT OF RAMPUR DISTRICT



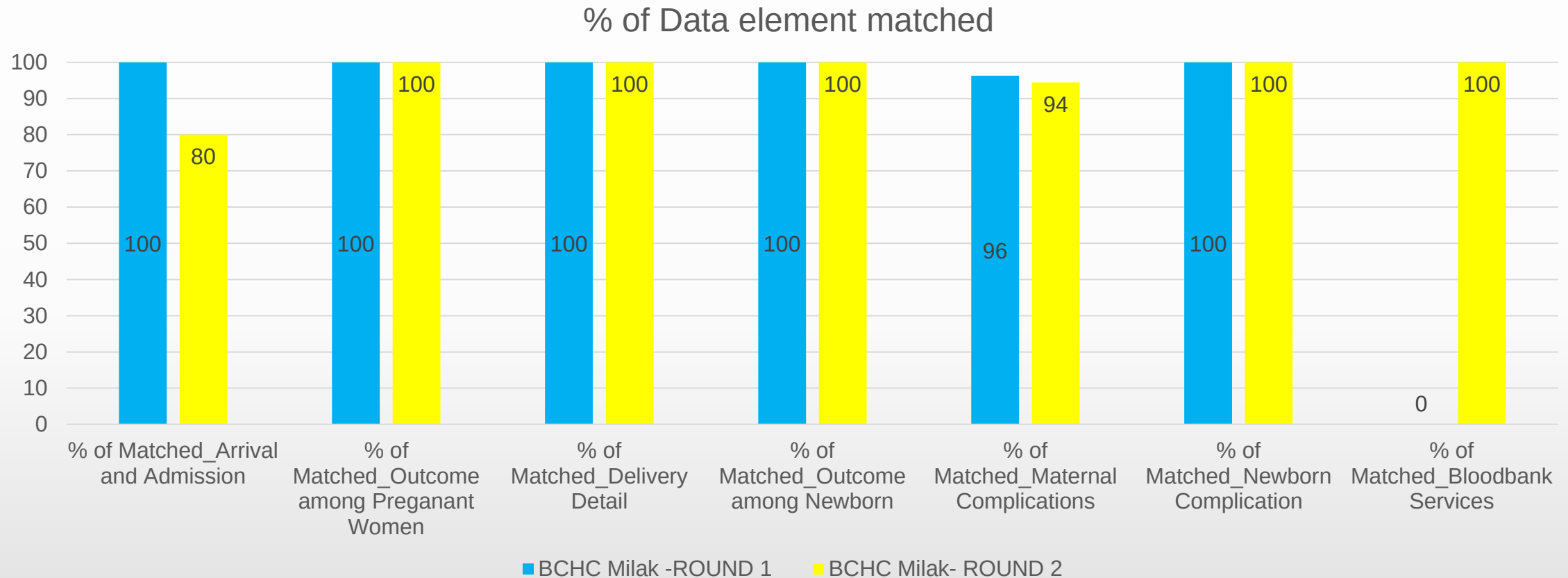
% MATCHED DATA ELEMENT IN BILASPUR BLOCK IN TWO ROUNDS OF RAMPUR DISTRICT



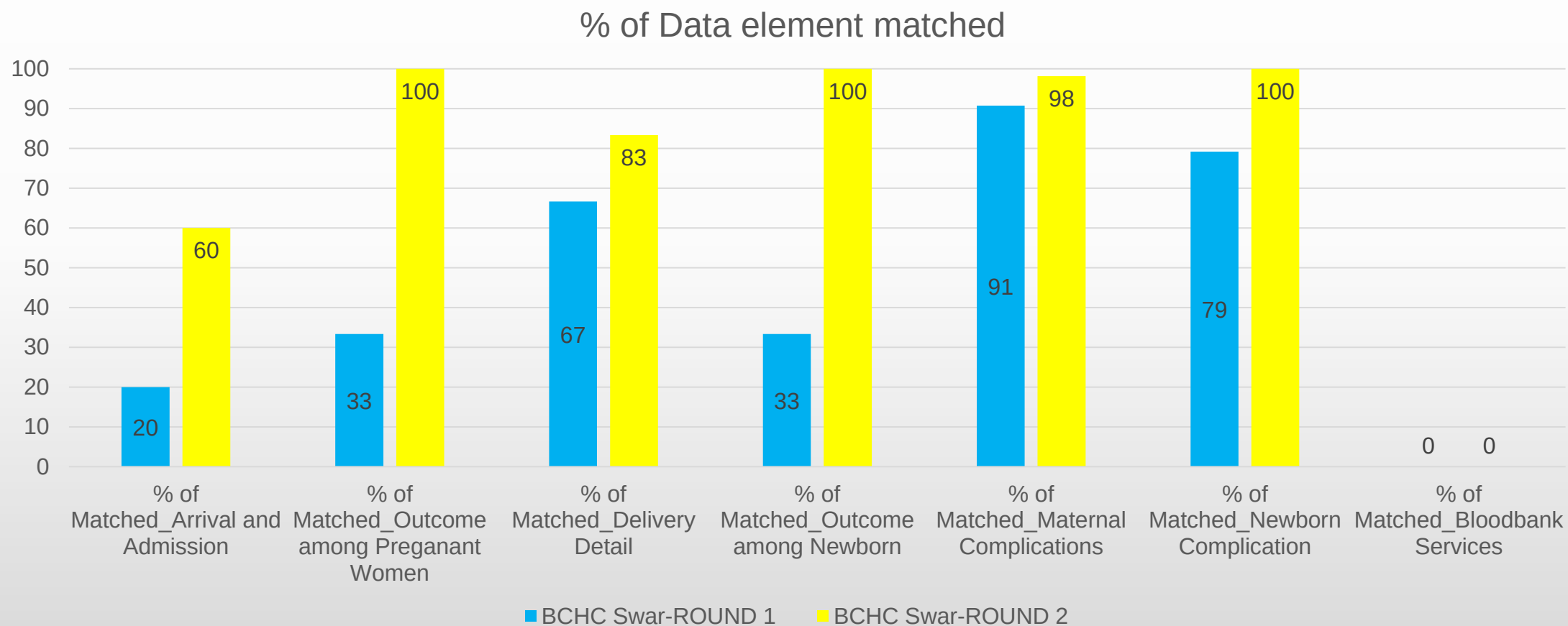
% MATCHED DATA ELEMENT IN DWH IN TWO ROUNDS OF RAMPUR DISTRICT



% MATCHED DATA ELEMENT IN MILAK BLOCK OF TWO ROUNDS OF RAMPUR DISTRICT

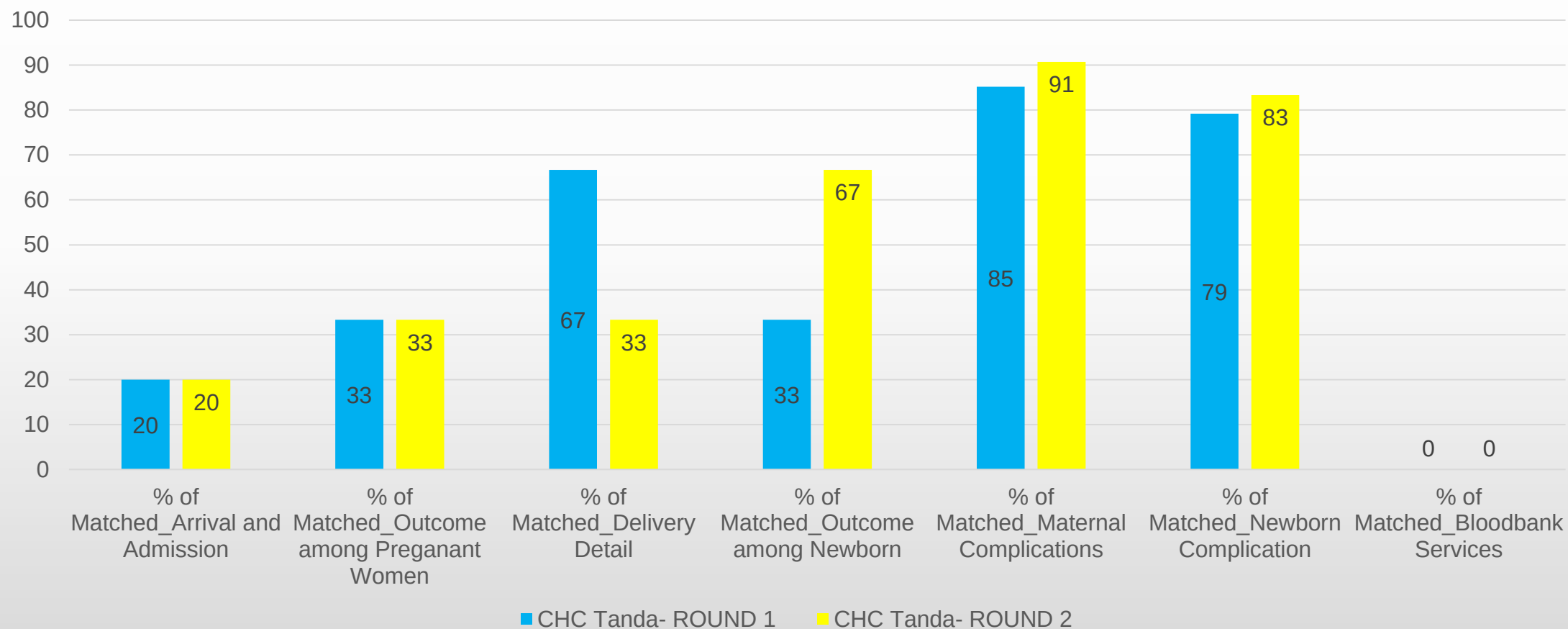


% MATCHED DATA ELEMENT IN SWAR BLOCK OF TWO ROUNDS OF RAMPUR DISTRICT



% MATCHED DATA ELEMENT IN SWAR BLOCK CHC OF TWO ROUNDS OF RAMPUR DISTRICT

% of Data element matched



Data element *matching status* across facilities categories wise (1/2)

Category	Indicator	Remained High (2)	Improved (2)	Deteriorated (1)	Total (5)
		Mean	Mean	Mean	Mean
Arrival and Admission (5)	% of Matched_Arrival and Admission(R1)	50	80	20	56
	% of Matched_Arrival and Admission(R2)	80	90	20	72
	Mean Difference(R1-R2)	30	10	0	16
Outcome among Arrival Pregnant Women (3)	% of Matched_Outcome among Preganant Women(R1)	67	100	33	73
	% of Matched_Outcome among Preganant Women(R2)	100	83	33	80
	Mean Difference(R1-R2)	33	-17	0	7
Delivery Information(6)	% of Matched_Delivery Detail(R1)	83	75	33	70
	% of Matched_Delivery Detail(R2)	92	100	67	90
	Mean Difference(R1-R2)	8	25	33	20

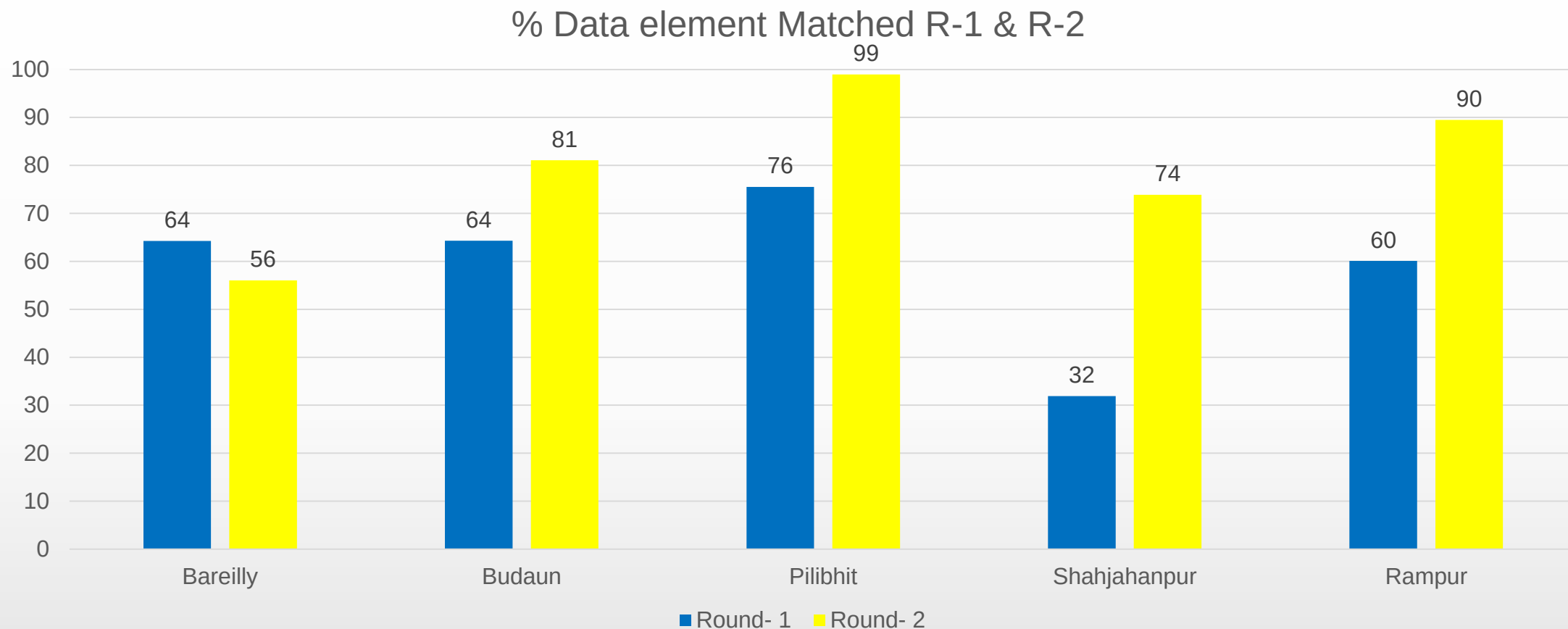
Matching status in “arrival and admission section” is still low across facilities (1/2)



Cont...Data element *matching status* across facilities categories wise (1/2)

Category	Indicator	Remained High (2)	Improved (2)	Deteriorate d (1)	Total (5)
		Mean	Mean	Mean	Mean
Outcome among Newborn (3)	% of Matched_Outcome among Newborn(R1)	67	67	67	67
	% of Matched_Outcome among Newborn(R2)	100	100	33	87
	Mean Difference(R1-R2)	33	33	-33	20
Maternal Complication (54)	% of Matched_Maternal Complications(R1)	93	16	91	61
	% of Matched_Maternal Complications(R2)	97	93	85	93
	Mean Difference(R1-R2)	5	77	-6	31
Newborn Complications (24)	% of Matched_Newborn Complication(R1)	90	6	83	55
	% of Matched_Newborn Complication(R2)	100	92	79	93
	Mean Difference(R1-R2)	10	85	-4	38
Blood bank Services (3)	% of Matched_Bloodbank Services(R1)	50	33	0	33
	% of Matched_Bloodbank Services(R2)	0	50	0	20
	Mean Difference(R1-R2)	-50	17	0	-13

In 4 blocks and 1 DWH Matching was poor but percentage increased in 2nd round due to availability of source documents and maintaining them by the staff nurse and staffs have taken responsibility to fill the format.



Substantial improvement is also visible across the districts except Bareilly in proportion of data elements that are matched with respective source document in Bareilly Zone

Salient findings

- There are 1 facilities which need special attention, which have deteriorated in data quality assurance. i.e. CHC Tanda
- There is a substantial gaps in understanding of arrival and admission
- The major gaps in the register are found is;
 - A availability of source register mainly for maternal and new-born complication related data elements are low among facility.
 - The improvement in the availability of source documents are relatively lower among these poor performing facilities while considering their potential scope for improvement.

Conclusion

- Use the local language HMIS(Hindi) format to avoid misunderstanding.
- Encourage/give advice to the all data provider individual. And should be increase the level of supervision for the use of valid register.
- To overcome from our weakness all the Staff Nurse, Pharmacist, Lab technician should make good coordination with other members Issues and problems of each working members should reach to MOI/c. and S/he should conduct a meeting with all members and discuss the SOPs of HMIS and UPHMIS format, and solve the problem of identification of cases and data entry and most imported one person should be appointed from each department to collect the data from source register.
- Quality of data can't increase until they will take the responsibility and will make summaries of all outcome after every 20th of every month in their source register and this should be checked by the MOI/c or BPM.
- Before importing data to the portal MOI/c must conduct a validating committee and check the quality of the data i.e. numerator should meet the denominator. And discuss why outliers and data are fluctuating. And already District have validation committee, just they need to strengthen and take strong decision on fluctuation of data. They should inspect whether data is and verified strict action should be taken after conducting Supportive supervision by government official.
- Hard copies of HMIS and UPHMIS format should be present in every facilities and minutes of meeting as this shows data is validated by the MOI/c.

Limitation

- Primary data is only from 4 blocks of Rampur district and The sequential explanatory study identified some barrier and challenges associated with the matching quality of data in UPHMIS. The methods could be reproducible on a larger scale and could aid in development for data quality improvement. We believe bigger studies with large samples could unfold these issues in details.
- Only Critical Data elements are covered under supportive supervision visits.
- There could be an other factor like review meeting, feedback mechanism which is not adjusted in this study.

THANK YOU